Buddhist cave-temples and the Cao family at Mogao Ku, Dunhuang

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Abstract

This paper presents the excavations made in the early 1960s to the late 1970s of the architectural remains in front of the Mogao Caves: their structure, date and method of construction, and the relationships between the caves and the architectural remains. Also discussed is the present state of the caves located to the north, which have been excavated during the past few years although as yet no report is published. The history of the caves is then examined within the contest of Cao family patronage, which provides the rationale for monumental works in north-western China.

Keywords

China; Buddhism; ritual sites; temples; historic archaeology; crafts; architecture.

Mogao Ku is one of five Buddhist cave-temple sites in the Dunhuang region of north-western China; these five are the Mogao Caves, the Western Thousand-Buddha Caves, the Eastern Thousand-Buddha Caves, the Yulin Caves and the Wugemiao Caves—all of which are known collectively as the Dunhuang caves. Mogao Ku is about 25 km. south east from the town of Dunhuang at the western end of the Gansu Corridor, China (Fig. 1). The 493 remaining caves at Mogao Ku today (according to the numbering system of the Dunhuang Research Academy) contain altogether about 45,000 m² of murals and more than 2,000 painted statues (Plate 1). The caves were built from the fifth to the fourteenth centuries—through more than ten successive Chinese dynasties (Fig. 2). Mogao Ku is the largest treasure house of Buddhist art in China and represents the acme of advancement in Chinese Buddhist caves (DRA 1981).

Discovery of the Library Cave and outflow of the Dunhuang treasures

In 1900 (the 26th year of Guangxu in the Qing Dynasty), a Taoist priest by the name of Wang Yuanlu discovered the world famous Dunhuang Library Cave (Cave #17), which was filled with a large amount of ancient cultural relics dating from the third to eleventh
Figure 1  Location of the Mogao Caves in north-western China.

Plate 1  Photograph of Cave #428 interior with both murals and sculptures, dating to the Northern Zhou dynasty (sixth century AD).
centuries AD. Upon sorting them out, the materials were found to consist of scrolls of religious writings, old administrative documents, as well as embroidery works and paintings. This discovery was a great shock to the academic circles of our country and of the whole world. Known in academic circles as the Dunhuang Manuscripts, the scrolls and documents dating from the Western Jin Dynasty (AD 265–316) to the Northern Song Dynasty (AD 960–1127) deal with many branches of the social sciences and natural sciences – such as politics, economy, military affairs, religion, literature, philology and art. As a result, ‘Dunhuangology’, a comprehensive new branch of knowledge, arose in the world. Today, Dunhuangology is engaged in within more than twenty foreign countries and regions.

The Dunhuang treasures – consisting of the manuscripts and paintings in the Dunhuang Library Cave, wall paintings, painted clay sculptures and other relics – were plundered again and again in the past. Sir Mark Aurel Stein, Hungarian by birth and a British national, was an expert in archaeology and Buddhist studies. He came to know about the archaeological importance and artistic value of the Dunhuang treasures in 1902 through the writings of Professor Lajos de Loczy, Head of the Hungarian Geological Survey. Stein visited Dunhuang in 1907 and 1908, taking back to England a rare collection of manuscripts; paintings on paper, silk and ramie; wall paintings; and sculptures (Stein 1912; Whitfield 1982–3). He was followed by the French archaeologist Paul Pelliot, the American art historian Langdon Warner, the Russian explorer Sergei Oldenburg, and so on (cf. Hopkirk 1984). As a result, tens of thousands of the Dunhuang manuscripts, more than twenty murals, and several painted clay sculptures were plundered and now reside in the British Museum, London; the National Museum in New Delhi; the Musee Guimet and Bibliotheque Nationale in Paris; and the Hermitage Museum in St Petersburg.

After the founding of the People’s Republic of China, the work of preserving and researching the Dunhuang resources was strengthened. The Dunhuang Research Academy (DRA) was set up there by the PRC Government and now devotes itself to the work of preserving and researching the Dunhuang relics (DRA 1982a, 1982b, 1982–7, 1986). It has sponsored three International Symposia on Dunhuangology in 1987, 1990 and 1994 (DRA 1990).

In 1961, Mogao Ku was promulgated by the State Council of China as one of the historical monuments and cultural relics under state protection. The Mogao Caves, which not only hold a significant position in the history of Chinese Buddhist art but were also
named a World Cultural Heritage Site by UNESCO in 1987, have taken on a new look today. The site uses the cliffs that run north–south along the eastern side of the Mingsha Hills. The caves can be divided into two groups, the Northern group and Southern group, within a 1600 m stretch of cliff (Fig. 3). The Southern district is the main part of Mogao Ku, stretching about 1000 m long and encompassing 487 of the numbered caves. Many of these caves are arranged in two, three or four vertical levels – in some places even five levels – making the cliff look like a honeycomb (Plate 2). There are more than 280 caves in the Northern district stretching for 600 m. Only five of these contain Buddhist murals or statues, and the remainder are considered to have been used by the artists – the mural painters and the statue makers. Recent archaeological excavation has shown that the functions of these caves are varied.
Temple buildings at Mogao Ku

Archaeological work started at Mogao Ku in the early 1960s. From 1963 to 1966, work concentrated on stabilizing loose parts of the cliff. An excavation was also carried out in front of the caves in the Southern group, extending 380 m NS × 5–15 m EW and generally 3–5 m. in depth but reaching 7–14 m. deep in some places (Fig. 4). Then, from 1979 to 1980, another excavation was conducted just in front of Cave #130. The remains of twenty-two buildings were discovered in these two excavations, occurring in groups ranging in date from the tenth to fourteenth centuries. Three more caves and four small shrines were also recovered during these excavations. The newly discovered caves (# 487, 488, 489) were all built into the cliff face below the current ground level. The shrines (#490, 491, 492, 493) were found on the front surface of the cliff at the west side, and they were above the ground surface on which the building remains were recovered.

The front buildings were wooden structures connected directly to the caves; they take the form of ‘fore-temple with back cave’ (Pan and Ma 1985). All the buildings were located

Figure 4  Map of the 1963–6 excavations in front of the numbered caves along the cliff. Hatch marks indicate locations of fore-temples discovered in these excavations.
in front of the bottom level of caves, which is roughly equal to the present ground surface. Inside the buildings was much evidence pertaining to the erection and the renovation of the related caves. Most of the building structures consisted of a small antechamber with eaves built on to the face of the cave; the platforms of these antechambers contained only earth and stones and had no brick facing. The floor of the antechamber platform was pounded earth. The platform extended no further than the eaves and only some traces of the sills that were set into the floor and fragments of the front earthen wall remained. All the wooden components had long ago been destroyed. The structure of the most recently excavated building is the main wooden hall of a temple at Cave #53, with quite a large foundation platform faced with bricks. The research and recovery work of the original design of the front temple of Cave #53 (Fig. 5) has been carried out by Professor Xiao Mo based on the traces of the temple’s structure in comparison with extant Song-period structures and historical documentations of period architecture (Xiao 1989).

The fore-temple excavation at Cave #53

Cave #53 was built in the Tang Dynasty (AD 618–906) – as were the nearby caves #51, 52, and 54 – and it had been renovated early in the Song Dynasty (AD 960–1035). During that renovation, the floor of the cave was lowered 1.2 m, the western section expanded deeper, and the northern wall was sealed off to form another cave, now numbered #469 (Fig. 6). An inked inscription found in Cave #469 bore the date of ‘Guang Chun Third Year’ (AD 953), falling in the Latter Zhou Kingdom of the Five Dynasties period. Since the inscription must have been created before that part of the original cave was sealed shut, it is thought that the renovation would have occurred after 953 and probably in the early phase of the Song Dynasty. At that time, the fore-temple of the cave was built. During the erection of the temple, the previous front section of this cave was sealed and the length of the passageway was extended at the eastern end. The temple was eventually destroyed by a
fire, as evidenced by burned spots left on the surface of the platform, probably occurring after 1068 but before the Yuan Dynasty (AD 1271–1368). A Xi Ning Yuan Bao coin cast and distributed in the first year of Xi Ning (AD 1068) in the Song Dynasty was found on the floor of the temple, and Yuan Dynasty relics were found on top of the burned earth layer.

The fore-temple structure can be divided into three parts: platform, stairs and main temple building. The platform was filled with earth and broken stones that came from erecting, renovating or expanding the cave connected to the temple. The main hall was built on the platform, and only the lower part of the building and platform have survived; the roof and most of the upper walls have been destroyed. The main entrance was located at the middle of the front wall of the temple’s main hall. The stairs, made of bricks, were situated in the center of the platform front and led directly up to the main entryway to the
temple. Inside, the floors of the main hall were usually paved with tiles bearing a flower design. The western wall of this temple is the cliff face; it has been reconditioned, and in the middle of the wall is a passageway leading into the cave. The southern and northern walls, which are quite thick and are wide at the bottom and narrow towards the top, have outer and inner parts. The inner parts of both walls are the shaped cliff face; the outer parts are usually made of rammed earth, except in a few cases where sun-dried mud bricks were used.

**Platform** This temple’s platform measures 11.93–12.05 m long × 7.9 m wide × 0.84 m high. The front sides are faced with bricks; inside, the platform is filled with broken stones. The upper surface of the platform is paved with unglazed tiles bearing flower patterns (Fig. 7), and there are ten regularly spaced grooves for the sills. Along the edge of the platform there are sixteen square holes (14–18 cm long × 14–20 cm wide × 6–12 cm deep) for setting wooden railing posts. Although the sills have decayed, the ends of their grooves have been found to connect to several of the railing’s postholes; thus the function of the ground sills must have been for setting and stabilizing the intermediate posts. Six brick stairs (2.2 m wide × 1.54 m deep) are located in the middle of the eastern side of the platform. On each side of the stairs was a groove for a sill whose top was connected to an intermediate posthole of the railing and whose bottom was anchored at another posthole. This suggests that the stairs as well as the platform were bounded by wooden railings.

**Temple** The main hall of the temple was three bays wide, totalling 7.25–7.45 m. The bays were of unequal lengths: north bay = 2.1 m; central bay = 3.1 m; and south bay = 2.05 m. The depth of the hall was two and a half bays, measuring 5.6 m in all. The floor of this temple was lined with flower pattern tiles – mostly lotus and cloud design, but some had entwining vines design or entwining vines with circled clouds design.

On the surface of the platform, there are three rows of column postholes (measuring 23–42 cm in diameter) from east to west. There are also floor sills connecting the inner hypostyle columns to the eaves columns. Because the wooden sills have decayed, the paving tiles previously lined up against the sills have collapsed into the spaces where the sills once were.

**West wall** Most of this wall was made by shaping the cliff, the remainder being built with sun-dried bricks which sealed the previous front section of this cave and also Cave #52. Several holes are found in this wall which would held beams; some of them were probably used for the temple structure. The surface of the west wall was finished with a layer of mud and then lime; murals were then painted on the surface.
Gable walls The southern and northern gable walls, whose remains measured c. 5.8 m long × 0.3–0.6 m high × 0.95–0.1 m thick, are made of rammed earth that contains a lot of sand so that it is hard to identify individual rammed layers. On the interior surfaces of the walls, there is a mud layer, but the exterior surfaces were finished with lime.

Front wall In the floor of the doorway, there are some traces of the wooden threshold, now decayed, which had been set into a groove 15 cm wide x 8 cm deep. This groove connects to postholes for the central bay columns at each end. Between the central bay columns and the columns set in the front corners stands the only remaining section of front wall, now 1.85 m long × 0.15 m thick and only a couple of centimeters high. The outside of the front wall is painted with a lime layer.

Fore-temple excavations at Cave #100

Cave #100 is one of the biggest caves at Mogao Ku, and its founding is dated between AD 936 and AD 940 (Fig. 8). The benefactor for construction of this cave, known from an inscription, was Cao Yuande, who commanded both the area’s military and administrative control in the Five Dynasties period (AD 907–960). The fore-temple is thought to have been built simultaneously with the cave because the mural in the temple and the wall painting inside the cave are in the same style; there is no later layer covering the mural in the front temple.

Platform The temple platform measured 15.7–15.9 m NS × 10 m EW × 0.6 m high. The front was faced by bricks 35 cm long × 18 cm wide × 6 cm thick, except on the western side. The stairs (2.5 m wide × 1.2 m high) were located in the middle of the eastern side and led straight to the entrance of the main hall.

Floor design The main temple building was three bays wide but only one bay deep; the central room measured 4.05 m. wide, the north room 2.7 m wide and the south room 3.15 m wide. The floors were paved with tiles bearing flower designs; the designs were mainly double-petalled lotus flowers with strings of pearls, some carved in relief with entwining vines (Fig. 9).

Main hall The western side of the hall consisted of the cut cliff wall. The southern and northern side walls are both 5.5 m long; the parts near the western side are actually carved extensions of the cliff face standing 2.8–3.2 m long and 6.5 m tall. The rest of these walls were rammed-earth, 0.9 m thick and now standing only 0.1–0.2 m high. The interior and exterior wall surfaces were finished with a layer of lime 0.5 cm thick. Because some murals have been found on the cliff wall section, it is probable that there were previously murals on the interior surfaces of the rammed earth walls as well. At the eastern ends of the side walls, there were holes in the corners of the room for erecting corner pillars (Fig. 8, pillar nos 1 and 4). Near the front of the central room were two stone pillar bases whose diameters were 0.6 m (pillar nos 2 and 3). There is some evidence of partitioning walls 0.1 m thick between the center pillars and the corner pillars, but nothing remains of the threshold between the center pillars themselves. Outside the front partitioning wall on the eastern edge of the platform, there are six sill (floor beam) grooves equally spaced from north to south. The ground sills (4.05 m long x 0.2 m wide x 0.1 m thick) were made of wood and functioned to connect and consolidate the intermediate railing posts at the edge of the platform. However, the wood itself has decayed without a trace.
Figure 8 Excavation plan of the fore-temple and cave at Cave #100. Hatching indicates the portions of the side walls built of tamped earth. Corner and central pillars are numbered 1 through 4.
The discovery of a Tang workshop

Other important archaeological discoveries at Mogao Ku were the caves and shrines disused in the past or sealed during ancient renovation projects. These provide us with some information about the locational arrangement of caves and the history of their changes. Cave #487 is a good example (Fig. 10).

Cave #487 is located in the center of the southern section, four meters lower than the current bottom tier of caves, including Caves #53, 54 and 467. It was built during the Northern Wei period (late fifth to mid-sixth centuries AD). The cave can be divided into two parts: antechamber and main chamber, and it appears that restoration work had changed the interior somewhat. From some traces remaining nowadays, we infer that the shape of the cave was originally rectangular, measuring 8 m long x 6–6.6 m wide. A small altar (2.6–2.9 NS x 2.6–2.7 m EW x 0.2–0.3 m high) stood at the middle of the main chamber of the cave. Each of the eastern ends of both the northern and southern walls have four shrines which have been damaged or restored in ancient times. Although the roof of this cave has been seriously damaged, some traces have been found near the front wall, showing that a herringbone roof previously existed there. Some pieces of murals were found which point to the existence of extensive wall paintings.

For reasons we do not know, this cave was transformed into a workshop for mural painters and statue makers during the Tang period. Changes in the cave’s shape probably relate to its use by these craftsmen. Some bowls containing pigments, broken pieces of clay sculptures, pottery vessels, carved wooden lotuses, eave tiles and roof tiles were discovered in the cave (Fig. 11) – all of them serving as evidence that the function of the cave had changed from a place of worship to a workshop. A Tang-period coin (Qian Yuan Tong Bao, first cast in 758) was found in the cave, suggesting that artists had taken up use of the cave by the mid-eighth century. A huge fire later occurred in the cave and it became disused, as evidenced by the burned layer on the cave floor. The complete abandonment of Cave #487 was caused by a catastrophic flood which deposited more than two meters of sand and stones in the interior. This flood probably occurred in the Five Dynasties period or early tenth century.

Northern district caves

As the vast majority of the Northern district caves contain no murals or sculptures, little attention has been paid to them. From 1989 onwards, however, the Dunhuang Research
Academy organized a team of professional archaeologists to conduct a survey of those caves to determine what they were used for and to attempt to understand something about their history. To date, the survey has gone through three phases and is still in progress. More than 280 caves have been rediscovered and cleaned; they date from the Sui Dynasty (AD 581–618) to the Yuan Dynasty (AD 1271–1368). The majority were used as living quarters, either exclusively or doubling as meditation spaces. They all contain bed platforms (kang) and cooking stoves inside, and certain sections of wall have been blackened by smoke from fires.

Fifteen burial caves were identified and five different types of funerary practices noted: cremation, double burial, coffin interment and corpses neither buried nor cremated. Burial caves were first discovered at Mogao Ku, and their number exceeds that at any other Buddhist cave-temple sites of China.

Three types of dhyana (meditation) cave were identified: single chamber, multi-chamber and dhyana-cum-living chamber. All of these caves contain bed platforms but without cooking stoves inside.

Some of the caves were used as Buddhist shrines, as has been identified from the remains.
of the sculptures and wall paintings inside. It is very interesting that a halo of a *buddha's* statue now housed in the Hermitage Museum of St Petersburg once stood in one cave in the northern district, as verified by the traces of its location between two *bodhisattva* statues in that cave.

Some caves were also used to store grain and flour. Sun-dried bricks were used to divide the cave into sections as a way of creating storage compartments.

Besides the caves rediscovered above, the following relics were also unearthed: silver, copper and iron coins; wood, ceramic and copper vessels; silk textiles; small painted wooden figurines; and written materials in various languages such as Han, Tibetan, Western Xia, Uighur and Mongolian. Fragments of a Western Xia dictionary were also found here.

Compared with the caves in the Southern district of Mogao Ku, the number of caves is fewer in the Northern district but there is greater diversity of types. The Southern section caves were primarily cave temples for worship, with few *dhyana* caves, whereas the caves in the Northern district have more practical uses. The excavation and cleaning will help us to clarify the uses of Northern section caves as well as their relations with those in the Southern section. The survey has made an important contribution towards a better understanding of the history of the whole site. As for the official report of this survey, it will be published at a later date.
The Cao family patronage

The discoveries in Cave #487 tell us that the ground surface around the time of the Tang Dynasty was much lower than today’s. Most of the caves built in that period were located high on the cliff face, connected to each other by wooden balustrades forming a plank path from one to another. Because the caves were so high up, there were no fore-temples attached to caves before the Tang Dynasty. As the ground surface gradually sedimented up to reach the floor level of the caves built in the lowest tier, the founding of fore-temples became possible. Projects to build these monumental structures started in the Five Dynasties (AD 907–960) and carried on in the Song (AD 960–1127) and Western Xia (AD 1032–1227) periods. During these three periods, the exterior view of Mogao Ku would have been most magnificent, exhibiting the grandest appearance during the caves’ long development.

For 122 years, through the Five Dynasties and Song periods, the highest military and administrative positions in the Gua and Sha states (presently Dunhuang and Anxi counties in Gansu province) were held by the Cao family. For five generations, they mastered the military and civil powers of state and had access to numerous economic resources. As sincere believers in Buddhism, they supported these important projects of building huge caves and temples at Mogao Ku and of drawing large-scale murals on the cliff surface in the open.

The wealthy and powerful Cao family not only were believers in Buddhism themselves but also made use of Buddhism as a tool for safeguarding and defending their rule. When we discuss the reasons for the widespread dispersal of Buddhism and the flourishing of Buddhist art, we cannot ignore the actions by the ruling family as adding fuel to the flames.

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References


